

Recommended Light Levels for Parking Garages

(See RP-20-98 & LM-64-01 for details)

Area		Minimum Horizontal Illuminance ² lux (fc)	Maximum Max-to-Min Ratio	Minimum Vertical Illuminance ³ lux (fc)
Basic ¹		10 (1.0)	10:1	5 (0.5)
Ramps ⁴	Day ⁵	20 (2.0)	10:1	10 (1.0)
	Night	10 (1.0)	10:1	5 (0.5)
Entrance Areas	Day ⁵	500 (50)		250 (25)
	Night	10 (1.0)	10:1	5 (0.5)
Stairways		20 (2.0)		10 (1.0)

1 = Typical conditions

2 = Measured on the parking surface without any shadowing effects.

3 = Measured 1.5m above parking surface at point of lowest horizontal illuminance (not including points on the boundaries facing outward.)

4 = Applies to clearway ramps (no adjacent parking) but not to sloping floor designs.

5 = Daylight may be considered in the design calculation.

Recommended Illuminances for Security Locations by Task

In lux (divide by 10 for approximate fc).

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(See G-1-03 for details)

Application	Task	Average Horizontal Illuminance	Vertical Illuminance	Avg-to-Min Ratio	Footnotes
ATMs & Night Depositories (Exterior)	Face of ATM		150	3:1	d,e,f
	Within 10' of ATM	100	a		
	Between 10' and 50' from ATM	20	a	3:1	
	Supported Parking	20	a	3:1	
	Side of Building out to 40' when ATM is within 10' of corner	20		3:1	
Building Facades			5-20	8:1	
Building Interiors (Unoccupied patrol areas)		10		6:1	
Convenience Stores and Gas Stations	Pump Island	60	a	4:1	
	Sidewalks, refuse areas and grounds	30	a	4:1	
	Interior of store	300	a	4:1	
Facial Identification			5-8	4:1	
Fast Food Restaurants	General Parking	30	a	3:1	
	Drive-up window out to 30'	60	a	3:1	
	Refuse area	30	a	3:1	
Guarded Facilities	Entrances and Gatehouse inspection	100	a	3:1	b
	Guardhouse Interior				c
Hotels and Motels	General parking	30	a	4:1	
	Sidewalks and grounds	10	a	4:1	

Law Enforcement, Fire, Ambulance and other Emergency Service Facilities	within 60' of all vehicle and pedestrian movement areas	80	a	3:1	
	General parking and walkways	30	a	3:1	
Parking Facilities, Garages and Covered Parking Spaces	On Pavement	60	a	4:1	
	Gathering Points (stairs, elevators, ramps)	50	a	4:1	
Parking Garages For the Elderly	Entrance	500	a		i
	Exterior walkways around senior facilities	50	a		l
Parking Lots, Areas for Public Parks	Open parking spaces	30	a	4:1	
	Park trails and walkways	6	a	4:1	j
	Likely loitering areas	10	a	4:1	
Residence, Single Family	Exterior Doorways		8		
Residence, Multi-family	Common areas	30	a	4:1	
	Common mailbox areas	100	a	4:1	
Schools and Institutions	General parking	30	a	4:1	l
	Sidewalks and footpaths	10	a	4:1	l
Supermarket, Major Retail Parking	Parking lot	30	a	4:1	
	Low activity - close-in parking	50	a	4:1	k

Notes for table

Identifier	Note
a	Vertical illuminance of 5 to 8 lux or values that produce a uniformity ratio of no more than 4:1 (25% of horizontal illuminance).
b	Horizontal illuminance should be as shown or twice that of immediate surrounding area, whichever is greater
c	Interior illuminance should be minimum recommended for specific task performance
d	Redundant lamps so loss of any one lamp will not reduce lighting levels below minimum
e	Good to excellent facial recognition required at a distance of 30'.
f	Unobstructed view out to 50' in all directions from face of machine
i	See IESNA RP-28, "Lighting and the Visual Environment for Senior Living"
j	Lighting should extend out on both sides of trail to a distance of 30'
k	Size of parking area determined by estimated customer count
l	For special events, parking lots and grounds should be lit from 2 hours prior to the event through 2 hours after the event.

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